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**1 Curriculum 68: Recommendations for academic programs in computer science: a report of the curriculum committee on computer science**

William F. Atchison, Samuel D. Conte, John W. Hamblen, Thomas E. Hull, Thomas A. Keenan, William McCluskey, Silvio O. Navarro, Werner C. Rheinboldt, Earl J. Schweppe, William Viavant, David M. Your March 1968 **Communications of the ACM**, Volume 11 Issue 3

Full text available: pdf(6.63 MB)

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**Keywords:** computer science academic programs, computer science bibliographies, computer science curriculum, computer science education, computer science graduate programs, computer science undergraduate programs

**2 Dialogue management in vector-based call routing**

Jennifer Chu-Carroll, Bob Carpenter

Full text available:

pdf(722.79 KB) [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [references](#)

This paper describes a domain independent, automatically trained call router which directs customer their response to an open-ended "How may I direct your call?" query. Routing behavior is trained from transcribed and hand-routed calls and then carried out using vector-based information retrieval techniques. The statistical discriminating power of the  $n$ -gram terms extracted from the caller's request, the call the appropriate des ...

**3 HAL: a multi-paradigm approach to automatic data path synthesis**

P. G. Paulin, J. P. Knight, E. F. Girczyc

July 1986

**Proceedings of the 23rd ACM/IEEE conference on Design automation**

Full text available: pdf(807.14 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index te](#)

A novel approach to automatic data path synthesis is presented. This approach features innovation process as well as in the system implementation. The synthesis process exhibits three new features to a subtask that performs an expert analysis of the input data flow graph and attempts to evenly operations requiring similar resources. This is done using a novel "load balancing" technique. The global pr ...

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1 [The Hearsay-II Speech-Understanding System: Integrating Knowledge to Resolve Uncertain](#)

Lee D. Erman, Frederick Hayes-Roth, Victor R. Lesser, D. Raj Reddy

June 1980 **ACM Computing Surveys (CSUR)**, Volume 12 Issue 2

Full text available: pdf(3.83 MB)

Additional Information: [full citation](#), [references](#), [citing](#), [index terms](#)

2 [Metaheuristics in combinatorial optimization: Overview and conceptual comparison](#)

Christian Blum, Andrea Rolí

September 2003 **ACM Computing Surveys (CSUR)**, Volume 35 Issue 3

Full text available: pdf(431.84 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The field of metaheuristics for the application to combinatorial optimization problems is a rapidly growing research. This is due to the importance of combinatorial optimization problems for the scientific and industrial world. We give a survey of the nowadays most important metaheuristics from a conceptual point of view. We outline the different components and concepts that are used in the different metaheuristics in their similarities and differences. Two v ...

**Keywords:** Metaheuristics, combinatorial optimization, diversification., intensification

3 [Survey of expert critiquing systems: practical and theoretical frontiers](#)

Barry G. Silverman

April 1992 **Communications of the ACM**, Volume 35 Issue 4

Full text available: pdf(2.84 MB)

Additional Information: [full citation](#), [references](#), [citing](#), [index terms](#)

**Keywords:** critics, expert critiquing systems

4 [Performance issues and error analysis in an open-domain question answering system](#)

Dan Moldovan, Marius Paşca, Sanda Harabagiu, Mihai Surdeanu

April 2003 **ACM Transactions on Information Systems (TOIS)**, Volume 21 Issue 2

Full text available: pdf(270.12 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper presents an in-depth analysis of a state-of-the-art Question Answering system. Several

examined: (1) the performance of each module in a serial baseline system, (2) the impact of fee insertion of a logic prover, and (3) the impact of various retrieval strategies and lexical resources conclusion is that the overall performance depends on the depth of natural language processing tools used for answer finding.

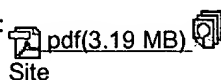
**Keywords:** Question answering, natural language applications, performance analysis, text retrieval

## 5 Unsupervised learning of the morphology of a natural language

John Goldsmith

June 2001 **Computational Linguistics**, Volume 27 Issue 2

Full text available:



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This study reports the results of using minimum description length (MDL) analysis to model unsupervised the morphological segmentation of European languages, using corpora ranging in size from 5,000 words. We develop a set of heuristics that rapidly develop a probabilistic morphological grammar, our primary tool to determine whether the modifications proposed by the heuristics will be adopted resulting grammar matches well the analysis that ...

## 6 APL design of graphic displays for motivation in distance education

Alvin J. Surkan

July 1998 **ACM SIGAPL APL Quote Quad , Proceedings of the APL98 conference on Array programming language**, Volume 29 Issue 3

Full text available: pdf(609.27 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

APL is used in the experimental design of graphic displays to be applied in real-time, on-line educational graphic displays are to be integrated in instructional dialogs. Our aim is to discover displays that motivate students while they take computer mediated and distance learning courses. During the learning process, it is especially important for a student to receive feedback about his/her progress, continually and within seconds of the most recent interaction. This feedback ...

**Keywords:** display, distance education, feedback, graphic, histogram, motivation, online learning

## 7 Teamwork: MONAD: a flexible architecture for multi-agent control

Thuc Vu, Jared Go, Gal Kaminka, Manuela Veloso, Brett Browning

July 2003 **Proceedings of the second international joint conference on Autonomous agents and multi-agent systems**

Full text available: pdf(583.19 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Research in multi-agent systems has led to the development of many multi-agent control architectures. We believe that there is currently no known optimal structure for multi-agent control since the effective particular architecture varies depending on the domain of the problem. Therefore, deployment of a multi-agent system would be significantly sped up by a development and deployment environment which would allow us to modify the architecture. In this paper, we present ...

**Keywords:** arbitration, behavior-based control, collaboration, robot teams, team-oriented programming

## 8 Similarity queries I: Robust and efficient fuzzy match for online data cleaning

Surajit Chaudhuri, Kris Ganjam, Venkatesh Ganti, Rajeev Motwani

June 2003 **Proceedings of the 2003 ACM SIGMOD international conference on Management of data**

Full text available: pdf(271.47 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

To ensure high data quality, data warehouses must validate and cleanse incoming data tuples from ...

In many situations, clean tuples must match acceptable tuples in *reference tables*. For example, product description fields in a sales record from a distributor must match the pre-recorded name and description of a product reference relation. A significant challenge in such a scenario is to implement an efficient matching operation that can effectively ...

9 Spatial querying for image retrieval: a user-oriented evaluation

Joemon M. Jose, Jonathan Furner, David J. Harper

August 1998 **Proceedings of the 21st annual international ACM SIGIR conference on Research and development in information retrieval**

Full text available:  pdf(1.68 MB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

10 Is Ada too big? A designer answers the critics

Brian A. Wichmann

February 1984 **Communications of the ACM**, Volume 27 Issue 2

Full text available:  pdf(606.02 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Many have criticized the Department of Defense's new computer language, Ada, saying it is too large, too complicated, or too difficult to use. Are they right? And are there some simplifications that could be made without destroying its usefulness?

11 A user interface using fingerprint recognition: holding commands and data objects on fingers

Atsushi Sugiura, Yoshiyuki Koseki

November 1998 **Proceedings of the 11th annual ACM symposium on User interface software engineering**

Full text available:  pdf(226.02 KB)

Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** fingerprint recognition, input devices, multimodal user interfaces, multi-computer use

12 Mutation analysis using mutant schemata

Roland H. Untch, A. Jefferson Offutt, Mary Jean Harrold

July 1993 **ACM SIGSOFT Software Engineering Notes , Proceedings of the 1993 international conference on Software testing and analysis**, Volume 18 Issue 3

Full text available:  pdf(872.48 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

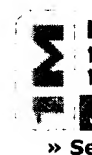
Mutation analysis is a powerful technique for assessing and improving the quality of test data used in software. Unfortunately, current automated mutation analysis systems suffer from severe performance problems. This paper presents a new method for performing mutation analysis that uses program schemata to transform mutants for a program into one metaprogram, which is subsequently compiled and run at speeds higher than achieved by ...

**Keywords:** fault-based testing, mutation analysis, program schemata, software testing

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